

## IV

# THE ROUTINE TREATMENT OF GONORRHŒA AND SYPHILIS

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## III

### A. THE TREATMENT OF SYPHILIS

(1) *Diagnosis*.—I base my diagnosis of *primary syphilis* on the microscopic examination both of the serum exudate from the suspected sore and of that obtained by puncture from the neighbouring glands. The dark-ground illumination (ultra-microscope) is used; the organism is stained by Giemsa's osmium method, and the fresh preparation is "silvered" by the Armuzzi-Strempel process. The serum is tested for the Bordet-Wassermann reaction by Wassermann's original method. The flocculation test in use is the original method of Sachs Georgi and Meinicke; Meinicke's Trübungs Reaction is less often employed.

(2) *General treatment* is carried out in the majority of cases with sodium salvarsan and also with neo-salvarsan, more rarely with neo-silver salvarsan. *Mercurial* inunction is also used, and occasionally Merzinol (Graves' oil). The *bismuth* preparations in use are Bismogenol and Mesurol; Milanol and others are used for earlier cases. Of the *iodine compounds*, iodide of potassium solution and Sajodin are employed.

*Primary Sero-negative Syphilis* in an adult male of average weight is treated in the following manner:—

#### 1ST SERIES OF INJECTIONS, ETC.

Day.	Arsenical Preparations.	Bismuth Preparation.	Mercurial Preparations.
1	Sodium or Neo-salvarsan, 0.45 gm. intravenously.	Bismogenol, 0.5 c.c. intra-gluteal.	Inunction is only used when Bismuth is not well tolerated. Graves' oil and calomel injections are given occasionally.
4	Sodium or Neo-salvarsan, 0.6 gm.	Bismogenol, 1 c.c.	

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These latter doses are repeated every three or four days (twice a week) until ten arsenical and ten bismuth injections have been given. The aggregate dose of the arsenical preparation is about 6 gm.

*Later Treatment.*—If the case does not seem to be an absolutely recent one, or if the Wassermann and other reactions have been doubtful at any time, this course is repeated after five or six weeks. The patient is kept under observation for a period of one and half to two years after treatment is suspended before he is pronounced cured. During this time his blood serum is tested at intervals of six months. His C.S.F. is examined at the end of the probationary period, and, if it is practicable, earlier as well. A number of readings should be made.

*Primary Sero-positive Syphilis* is treated by two of the above courses at an interval of five or six weeks.

*Secondary Syphilis* is treated by three courses, with a two- to three-months' interval between the second and third.

In *Tertiary Syphilis* I give a number of courses, never less than two, at intervals of two, three and six months, giving iodine preparations combined with injections of arsenic, mercury and bismuth.

In *Latent Syphilis* I give two or three courses of combined treatment, and more if the serological and C.S.F. findings demand it.

*Pregnant women suffering from syphilis* receive the combined course with an initial dose of 0.3 gm. sodium or neo-salvarsan, followed by one of 0.45 gm.

*Infants with congenital syphilis* are given neo-salvarsan in the following ascending series of doses : 0.03 gm., 0.045 gm., 0.075 gm., 0.1 gm. This is combined with Bismogenol or, in children, with Milanol oil, or with mercurial inunctions, or more rarely with injections of perchloride of mercury at the rate of 1 mgm., increasing to 2 mgm., once a week. Müller's calomel injections are also sometimes used.

*Tabes, General Paralysis of the Insane, and Syphilis of the Supporting Structures of the Central Nervous System.*—Malarial treatment is combined with salvarsan. Five injections are given before inoculating the patient with malaria and ten afterwards.

*Late cases with resistant serum reactions.*—Treatment is discontinued after two or three courses, whether the

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reactions are negative or positive. After a series of alternate injections of arsenic and bismuth, eight to ten malarial rigors are induced and followed up at once by large doses of a salvarsan preparation.

### B. THE TREATMENT OF GONORRHŒA

#### GONORRHŒA IN MEN

For average cases of gonorrhœa I employ sandal-wood oil and its derivatives Gonocystol, Gonosan and Santyl, also the infusion of Foliæ Uvæ Ursi and the preparations Hexal and Salol. Besides the commercial vaccines Gonargin and Arthigon, I use fresh vaccines prepared in my own laboratory, often from the patient's own serum. The dose of fresh vaccine varies from 25 or 50 million to 250 million. The doses of stock vaccines are laid down in my book on the subject.\* I do not supplement vaccine treatment with protein shock therapy.

*Local treatment* is commenced at once with Protargol ( $\frac{1}{4}$  to  $1\frac{1}{2}$  per cent.), Albargin (0.2 to 0.5 in 200) or Liquor argentamini with Argonin (0.4 to 1 or 4 to 8 in 200). Choleval and Targesin are also occasionally used, but Reargon has been discontinued. Injections are administered by the surgeon at intervals of one or two days, and by the patient, between consultations, three to five times a day. The syringe used by the patient holds 12 c.c., and has a glass barrel and a conical vulcanite nozzle.

*Irrigations* are employed in most cases, especially those of anterior urethritis. The remedies used are, in order of preference, potassium permanganate, 1/5,000; Albargin, 1/2,000 or 1/1,000; Albargin with silver nitrate, 1/2,000 or 1/1,000; oxycyanide of mercury, 1/5,000. These are administered at intervals of one to two days, always by the surgeon or an experienced male nurse. Hot irrigations are given at a temperature of 40–45° Cels. The solution is only allowed to enter the bladder when posterior urethritis is present.

*Chronic cases* are treated with the heated sound and the irrigating dilator.

*Prostatic infection* is treated by rest in bed and Arzberger irrigation. *Abscesses*, when present, are treated with diathermy, if possible without making an incision,

\* See reference at end of article.

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but *prostatic infection without abscess* is treated first with vaccines—massage, diathermy and Guyon's treatment being employed later. Cases of *epididymitis* are given rest in bed, hot poultices, vaccines and diathermy, followed up by Jodvasogen and Ichthyol. *Arthritis, tenosynovitis* and *bursitis* are treated with diathermy, hot-air applications and vaccines, also with Atophan and Neatophan.

The *provocative methods* used in verifying cure are: Urethral and prostatic massage, the hot sound and injection of an iodine solution composed of Tinct. iodi 20 parts, potassium iodide 5 parts, and distilled water 160 parts, diluted with 5 volumes of water; also intragluteal and intravenous vaccine injections.

### GONORRHOEA IN WOMEN

For gonorrhœa of the urethra I use Protargol, 1 to 5 per cent., or Albargin,  $\frac{1}{4}$  to 3 per cent.; for that of the cervix, a glycerine tampon containing 10 to 20 per cent. Ichthyol and 2 to 10 per cent. Ichthargon, while for either I employ Gonostyli, with protargol 1 to 3 per cent.

[For further details readers are referred to my book, "Die Behandlung der Haut-und Geschlechtskrankheiten," A. Markus and E. Weber, Bonn, 1923.]